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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,683	12/06/2004	Nobuya Matsutani	43890-703	6754

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EXAMINER	
NGUYEN, TUYEN T	
ART UNIT	**PAPER NUMBER**
2832	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/516,683	MATSUTANI ET AL.	
	Examiner	Art Unit	
	TUYEN T. NGUYEN	2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 November 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) *4-21,33,36 and 37* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,22-32,34 and 35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of embodiment 1, figures 1-6 in the reply filed on 11/8/2006 is acknowledged. The traversal is on the ground(s) that claims 1-3 and 22-36 read on the elected species. This is not found persuasive because claim 36 depends on non-elected claim 6 and claim 33 do not read on the elected species. Claims 1-3 and 22-32 and 34-35 will be examined herewith.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is no antecedent basis for "the coil group terminal portions."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 22-32 and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shikama et al. [US 6,950,006 B1] in view of Shafer et al. [US 6,946,944 B2].

Shikama et al. discloses an array type choke coil comprising:

- a coil group [61a, 62a, 63a, 64a] arranged such that the axes of coil constituting the coil group in parallel;

- a ferrite magnetic material [2] burying therein the coil group, wherein the magnetic material is formed in a rectangular prism; and

- a plurality of terminals formed on at least two surfaces of the magnetic material.

Shikama et al. discloses the instant claimed invention except for the specific of the coil.

Shafer et al. discloses an inductor [10] comprising a coil [14] being buried in a magnetic body [14], wherein the coil formed by bending/stamping a metal sheet and having end terminals extending outside and disposed on at least two surfaces of the magnetic body.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use the coil design of Shafer et al. in Shikama et al. for the purpose of facilitating manufacturing.

Regarding claims 2-3 and 22-23, Shikama et al. discloses the inductor array electrical characteristic [inductance, magnetic flux] can be adjusted by (a) spacing the coil; (b) changing the thickness of the coil; (c) changing number of coils.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to arrange the coil having the center points in staggered arrangement for the purpose of controlling the inductance.

Regarding claims 24-26, the specific direction of current flow and the specific number of turns would have been an obvious design consideration based on the intended applications/environment uses.

Regarding claims 27 and 30-31, the specific arrangement of the terminals would have been an obvious matter of design choice for the purpose of facilitating mounting.

Regarding claim 29, Shikama et al. discloses an insulation resin layer formed on the surface of the coil.

Regarding claim 32, Shikima et al. in view of Shafer et al. discloses the instant claimed invention except for the specific of Ni and/or Solder/Tin layer(s).

Nickel, Solder or Tin layer(s) are known material use in surface mount application. It would have been obvious to one having ordinary skilled in the art at the time the invention was made to include a layer of Nickel layer for the purpose of providing connection to the substrate and a Tin layer for the purpose of providing connection to other device.

Regarding claim 35, Shikama et al. discloses the use of the inductor array in an electronic apparatus.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUYEN T. NGUYEN whose telephone number is 571-272-1996. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ELVIN ENAD can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TN